

CLAIMS

I claim:

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1. A computer system that executes a simulation model, comprising:

a. a plurality of model entities selected from the group consisting of instrument entities and outcome entities;

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b. a code segment for displaying the values of selected model entities;

c. a code segment for presenting an in-context description of each outcome entity and the method used to compute said outcome entity's value;

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d. a code segment for presenting qualitative descriptions of one or more state changes in the simulation; and

e. a means for a learner to control a selected instrument entity, wherein each instrument entity excluded from learner control is controlled by a selected automated agent.

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2. The computer system according to claim 1, wherein the learner controls the selected instrument entity by selecting values or by delegating the selection to an automated agent.

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3. The computer system according to claim 1 wherein said code segment for presenting an in-context description of each outcome entity and the method used to compute said outcome entity's value provides a link to a description for another related model entity.

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4. The computer system according to claim 1 wherein said code segment for presenting an in-context description of each outcome entity and the method used to compute said outcome entity's value provides algorithmic details in said description of the method of computation.

5. The computer system according to claim 1 wherein said code segment for presenting qualitative descriptions of one or more state changes in the simulation automatically prioritizes said descriptions and automatically discards descriptions that are less helpful to the learner.
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6. The computer system according to claim 1 wherein the simulation model is associated with a plurality of different problem scenarios.
7. The computer system according to claim 6 wherein a designer can allow the learner to control one set of instrument entities in one problem scenario and to control a different set of instrument entities in another problem scenario.
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8. The computer system according to claim 7 wherein different sets of automated agents control the excluded instrument entities in different problem scenarios.
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9. The computer system according to claim 6 wherein the designer assigns one set of automated agents to an instrument entity in one problem scenario and a different set of automated agents to the instrument entity in another problem scenario.
10. The computer system according to claim 1, further comprising a development tool for defining model entities, properties, and simulation components.
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11. The computer system according to claim 1 wherein the simulation model is a representation of an economic system.
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12. The computer system according to claim 1 wherein the simulation model is a representation of an ecological system.
13. The computer system according to claim 1 wherein the simulation model is transmitted through a network.
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14. The computer system according to claim 1 further comprising a graphical user interface for the learner to interact with the simulation.

15. A method for providing a learning experience comprising:

a. executing a simulation model comprising a plurality of model entities selected from the group consisting of instrument entities and outcome entities;

b. displaying the values of selected model entities;

c. presenting an in-context description of each outcome entity and the method used to compute said outcome entity's value;

d. presenting qualitative descriptions of simulation state changes; and

e. providing a means for a learner to control a selected instrument entity, wherein each instrument entity excluded from learner control is controlled by a selected automated agent.

16. The method according to claim 15, wherein the learner controls the selected instrument entity by selecting values or by delegating the selection to an automated agent.

17. The method according to claim 15 further comprising providing algorithmic details in said description of the method of computation;

18. The method according to claim 15 wherein the simulation model provides a plurality of different problem scenarios and allows the learner to control one set of instrument entities in one problem scenario and to control a different set of instrument entities in another problem scenario.

19. The method according to claim 15, further providing a development tool for defining model entities, properties, and simulation components.

20. The method according to claim 15, further transmitting the simulation model through a network.